

smartSMT

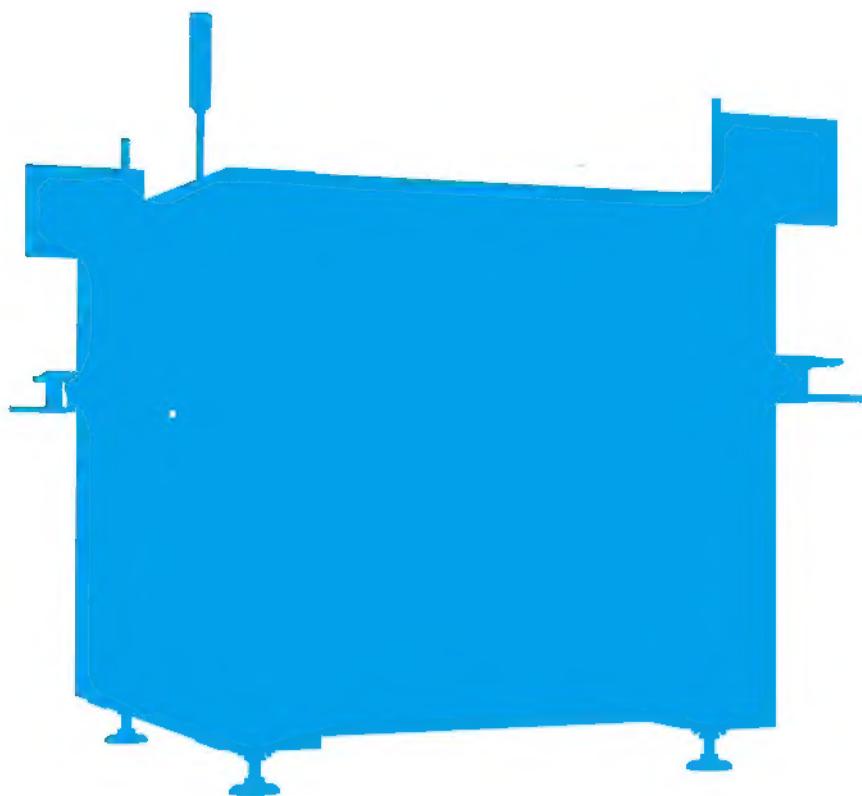
 Hanwha  
Techwin

*Double Flexibility Double Value*  
**DECAN Series**





# DECAN Series





# Double Flexibility Double Value

## **DECAN** Series



### **Screen Printer**

Advanced Chip Shooter

### **DECAN S2**

- 92,000 CPH
- 03015 ~
- Max. □ 55mm (H15mm)



F510 Head

Advanced Flexible Placer

### **DECAN F2**

- 80,000 CPH
- 0402 (01005 inch) ~
- Max. □ 55mm (H15mm)



F510 Head

Advanced Multi- Functional Placer

### **DECAN L2**

- 56,000 CPH
- 0402 (01005 inch) ~
- Max. □ 55mm, L75mm (H25mm)

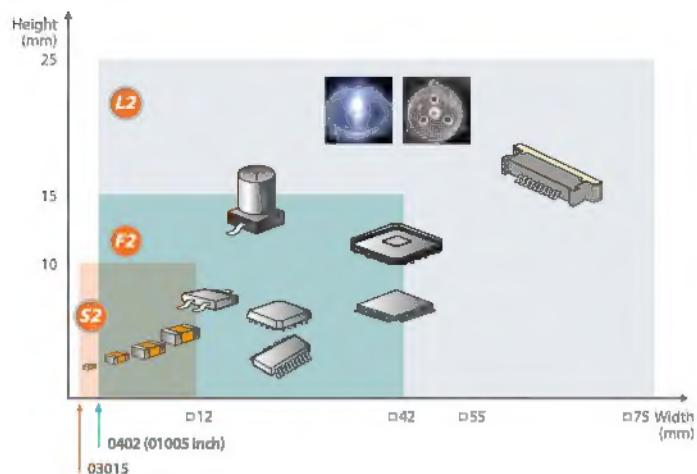


FS06 Head



### Wide Part Handling Capability

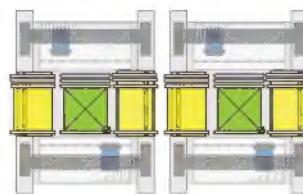
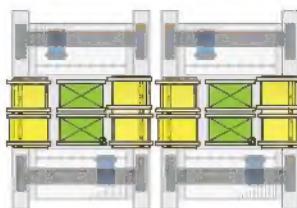
- Part capability of 03015 ~ □55mm (H25mm)
- Performs placement by recognizing the characteristics of the LED and Lens



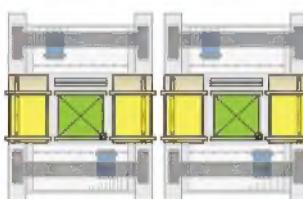
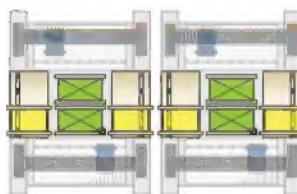
### Various PCB Transfer Systems

- Various structures maximizing productivity
- 1,200mm long PCBs
- Long boards (1,200 x 460mm)
- Dual lane as standard

#### Full Dual Conveyor

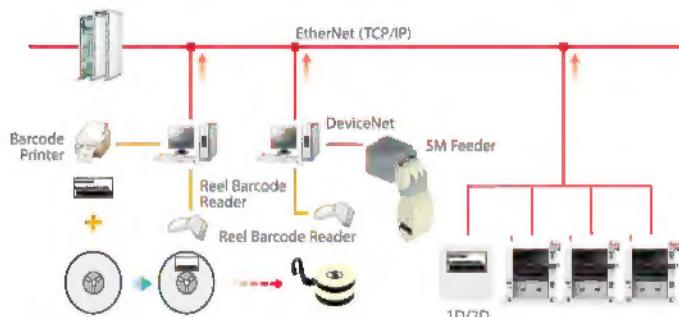


#### Shuttle Dual Conveyor



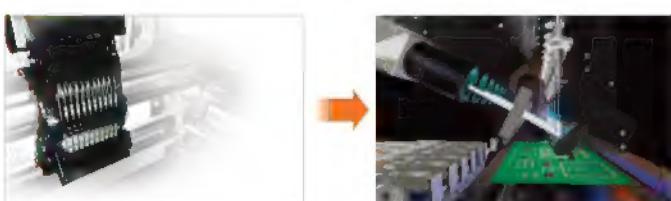
### Verified Production History Management Solution

- Parts verification (Prevents misplacement)
- Traceability (Lot tracking)
- T-LTS : Lot tracking for traceability



### High Speed Placement

- Minimizes the placement cycle time by recognizing the picked part and correcting the placement angle while moving to the placement position after picking the part





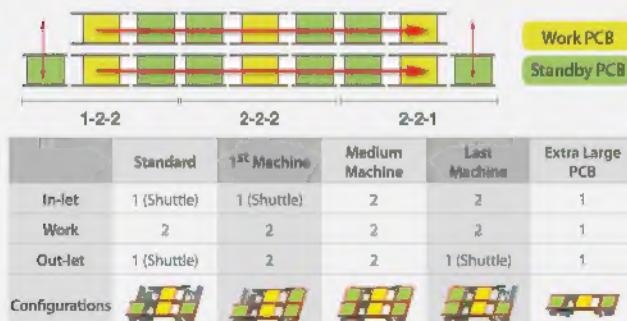
# Why DECAN?

- Wide part handling capability and flexible conveyor options suitable for various PCBs
- Reduces production time by optimizing the motion sequence and sharing the data with other machines
- Reinforces odd-type part recognition by applying a 3D lighting system and improving the vision algorithm
- High reliability of machine operation and increased convenience of operation by listening to customers' requirements

## FLEXIBILITY

### Modular conveyor system for various production environments

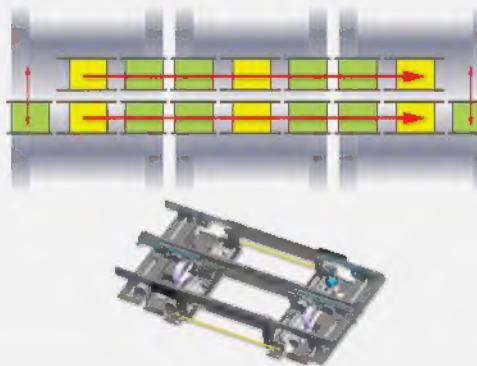
- Allows optimum conveyor module combination according to a production line by applying a modular conveyor that can be replaced on site (Shuttle → Dual)



## PRODUCTIVITY

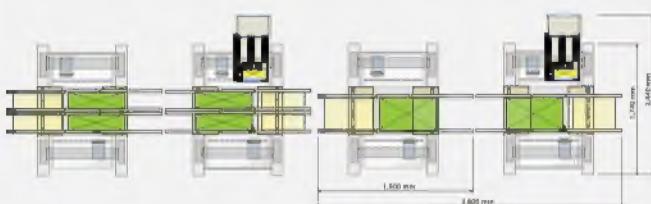
### Dual lane PCB transfer system for the improvement of productivity

- Zero PCB loading/unloading time by loading the PCB on the opposite lane and having it stand by during operation (Productivity Increases by 15% compared to a single lane machine)



### Machine applicable to large PCBs that can be modified on site

- The standard machine can be modified on site to handle large PCBs
  - Applicable to Max. 1,200 x 460mm PCBs
  - Possible to produce 1,200mm long boards on dual lane



### Places high precision Can Connector parts and LED/LED lenses



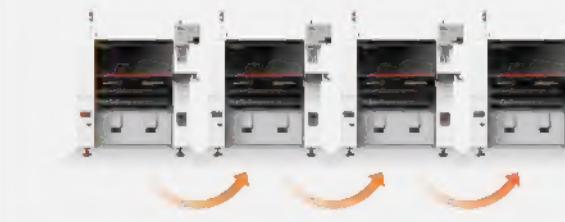
### Maximizes productivity by increasing simultaneous pickup rate

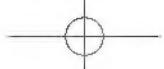
- Increases the simultaneous pickup rate by automatically correcting pickup positions



### Reduces the cycle time by sharing bad marks with other machines

- Shares the information of the bad mark of the PCB recognized by the first machine with other machines in the line
- Reduces the placement cycle time since the bad mark inspection is omitted by sharing the bad mark information

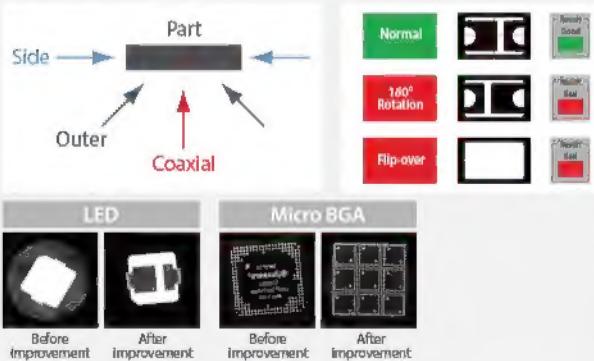




## RELIABILITY

### Prevents reverse placement by recognizing the polarity mark at the bottom surface of a part

- Recognizes the polarity mark on the bottom surface of a part using the 3-stepped 3D lighting

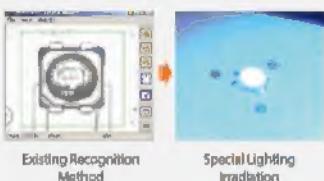


### Optimizes the placement of LED lenses

- LED direction and recognition of different types of LEDs
- Minimizes defective placement by recognizing the protruded positions



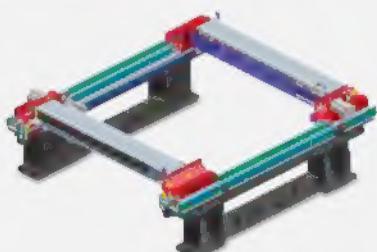
- Places a lens based on the light source by recognizing the LED light source



Patent Registration  
No. 1472444

### Utilising linear motors reducing noise and vibration

- Applies the twin servo control and linear motor to the Y-axis to realize low noise and vibration



## EASY OPERATION

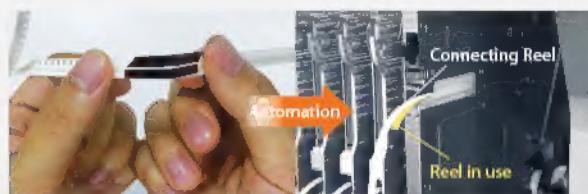
### Increased convenience of machine software operation

- The built-in optimization software allows a PCB program to be easily created and edited
- Provides various PCB information through a large LCD screen



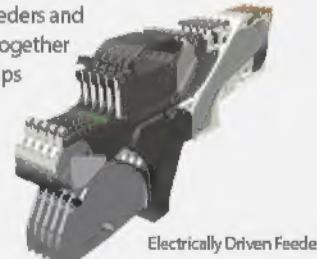
### Automatic tape connection reduces the work volume by half (Smart Feeder)

- Utilising the automatic tape loading and splicing for the first time in the SMT industry - Minimizes the part reel replacement time by automating the tape loading and splicing that was previously performed manually
- Zero cost for consumables for tape splicing



### Allows mixed use of an electrically driven feeders and pneumatic feeders

- Allows mixed use of electrically driven feeders and pneumatic feeders in the same feeder base
- Allows the electrically driven feeders and pneumatic feeders to be used together with existing feeders, which helps reduce production costs





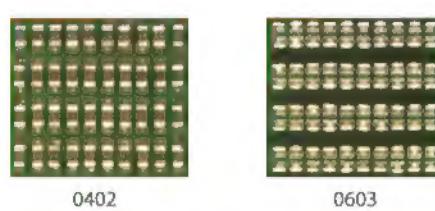
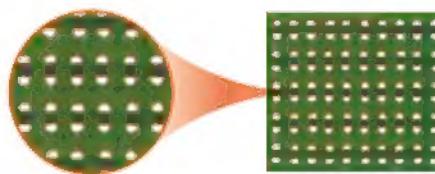
# Double Flexibility Double Value

## Advanced Chip Shooter

### DECAN s2

Increases the speed/accuracy for the placement of microchips (03015)

- Speed : 92,000 CPH (Optimum, HS10 Head)
- Structure : 2 Gantry x 10 Spindles/Head
- Accuracy :  $\pm 28\mu\text{m}$  Cpk $\geq 1.0$  (03015 Chip)  
 $\pm 25\mu\text{m}$  Cpk $\geq 1.0$  (IC)
- Parts Size : 03015 ~  
Max. □ 55mm (H15mm)
- PCB Size : 50 x 40 ~ 510 x 460mm (Standard)
  - ~ 610 x 460mm (Option)
  - ~ 740 x 460mm (Option)
  - ~ 810 x 460mm (Option)
  - ~ 1,200 x 460mm (Option)

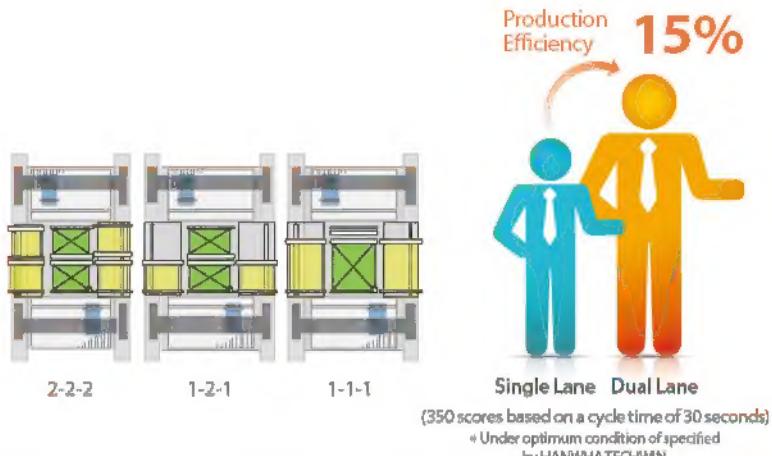


## Advanced Flexible Placer

### DECAN F2

Applicability to a wide range of parts and high speed placement available simultaneously!

- Speed : 80,000 CPH (Optimum)
- Structure : 2 Gantry x 10 Spindles/Head
- Accuracy :  $\pm 40\mu\text{m}$  Cpk $\geq 1.0$  (0402 (01005") chip)  
 $\pm 30\mu\text{m}$  Cpk $\geq 1.0$  (IC, Stage vision)
- Parts Size : 0402 (01005 inch) ~  
Max. □ 55mm (H15mm)
- PCB Size : 50 x 40 ~ 510 x 460mm (Standard)
  - ~ 610 x 460mm (Option)
  - ~ 740 x 460mm (Option)
  - ~ 810 x 460mm (Option)
  - ~ 1,200 x 460mm (Option)

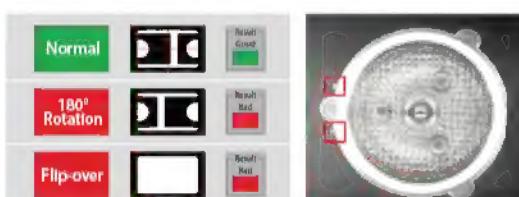


## Advanced Multi- Functional Placer

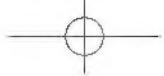
### DECAN L2

Optimized for the placement of odd-type parts as well as LEDs and LED lenses

- Speed : 56,000 CPH (Optimum)  
0.55 sec/component (QFP100 0.5P)
- Structure : 2 Gantry x 6 Spindles/Head
- Accuracy :  $\pm 40\mu\text{m}$  Cpk $\geq 1.0$  (0402 (01005") chip)  
 $\pm 30\mu\text{m}$  Cpk $\geq 1.0$  (IC, Stage vision)
- Parts Size : 0402 (01005 inch) ~  
Max. □ 55mm, L75 (H25mm)
- PCB Size : 50 x 40 ~ 510 x 460mm (Standard)
  - ~ 610 x 460mm (Option)
  - ~ 740 x 460mm (Option)
  - ~ 810 x 460mm (Option)
  - ~ 1,200 x 460mm (Option)



\*Under optimum condition of specified by HANWHA TECHWIN.



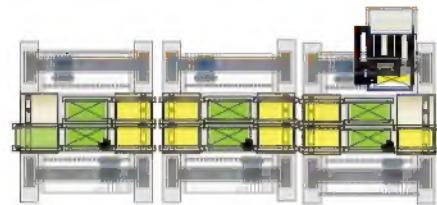
## Small Job Line



- Machine : F2 / L2
- Speed : 80,000 / 56,000 CPH
- Feeder Slot : 84 / 120 / 112 Slot
- Length : 1,430 / 2,130 mm

- Machine : S2 + L2
- Speed : 148,000 CPH
- Feeder Slot : 240 / 204 Slot
- Length : 2,860 mm

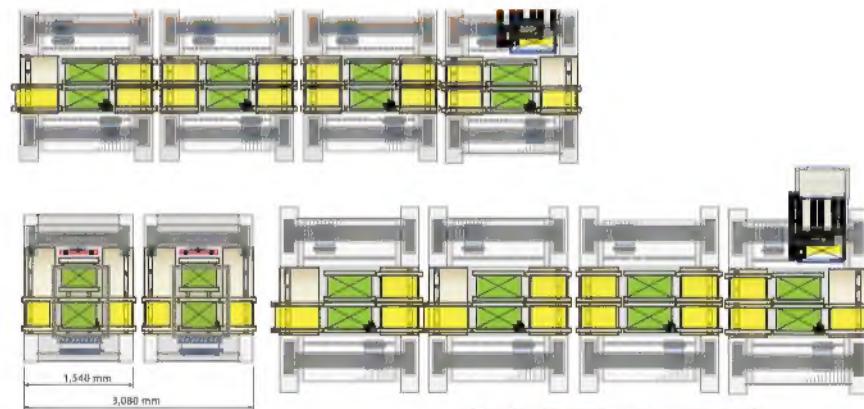
## Recommend Line



- Machine : S2 + F2 + L2
- Speed : 228,000 CPH
- Feeder Slot : 324 Slot
- Length : 4,290 mm

- Machine : F2 + F2 + F2
- Speed : 240,000 CPH
- Feeder Slot : 324 Slot
- Length : 4,290 mm

## High Performance Line



\* Note : Top/Bottom Simultaneous Production

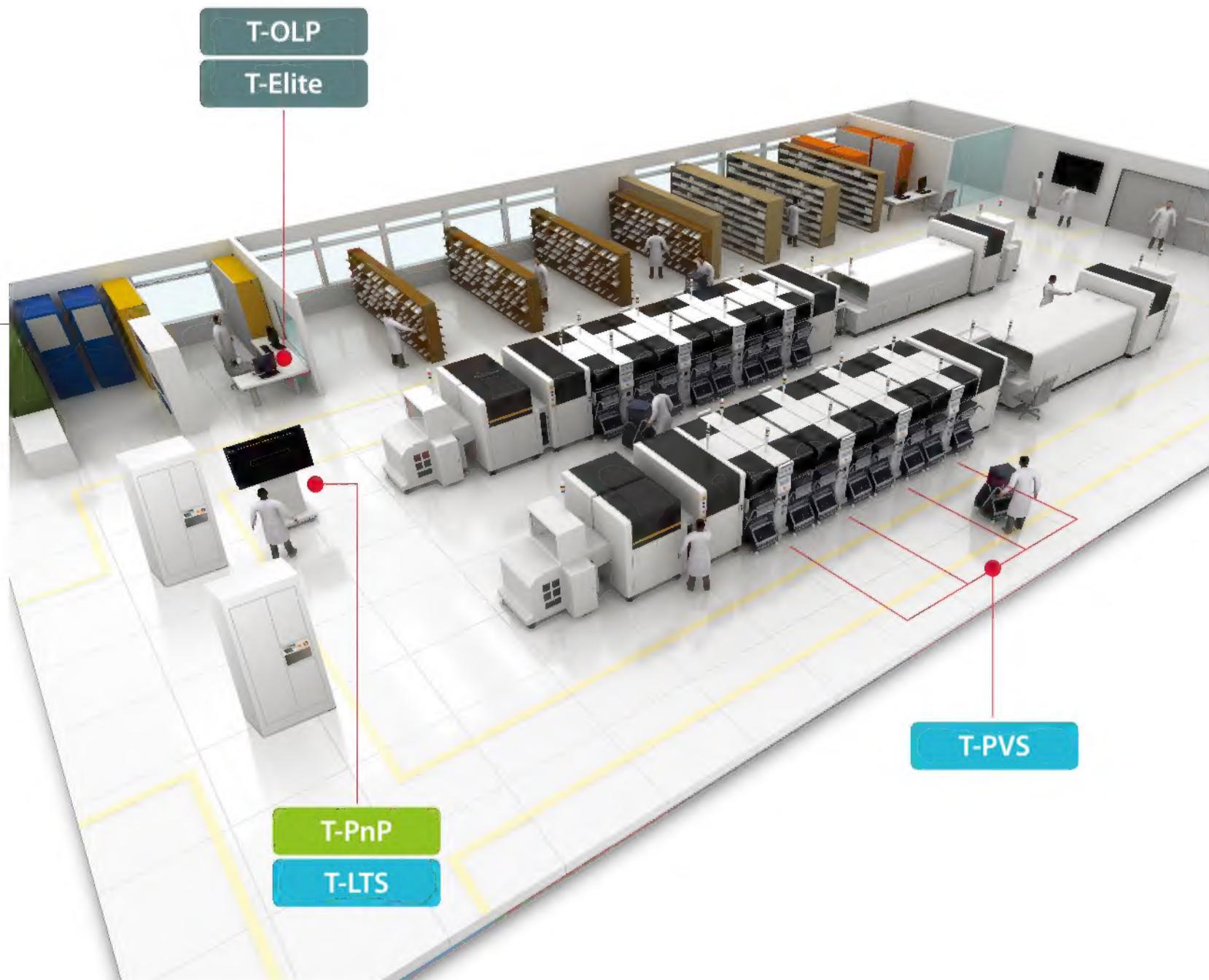
- Machine : S2 + S2 + F2 / L2 + L2
- Speed : 320,000 CPH
- Feeder Slot : 444 Slot
- Length : 5,720 mm

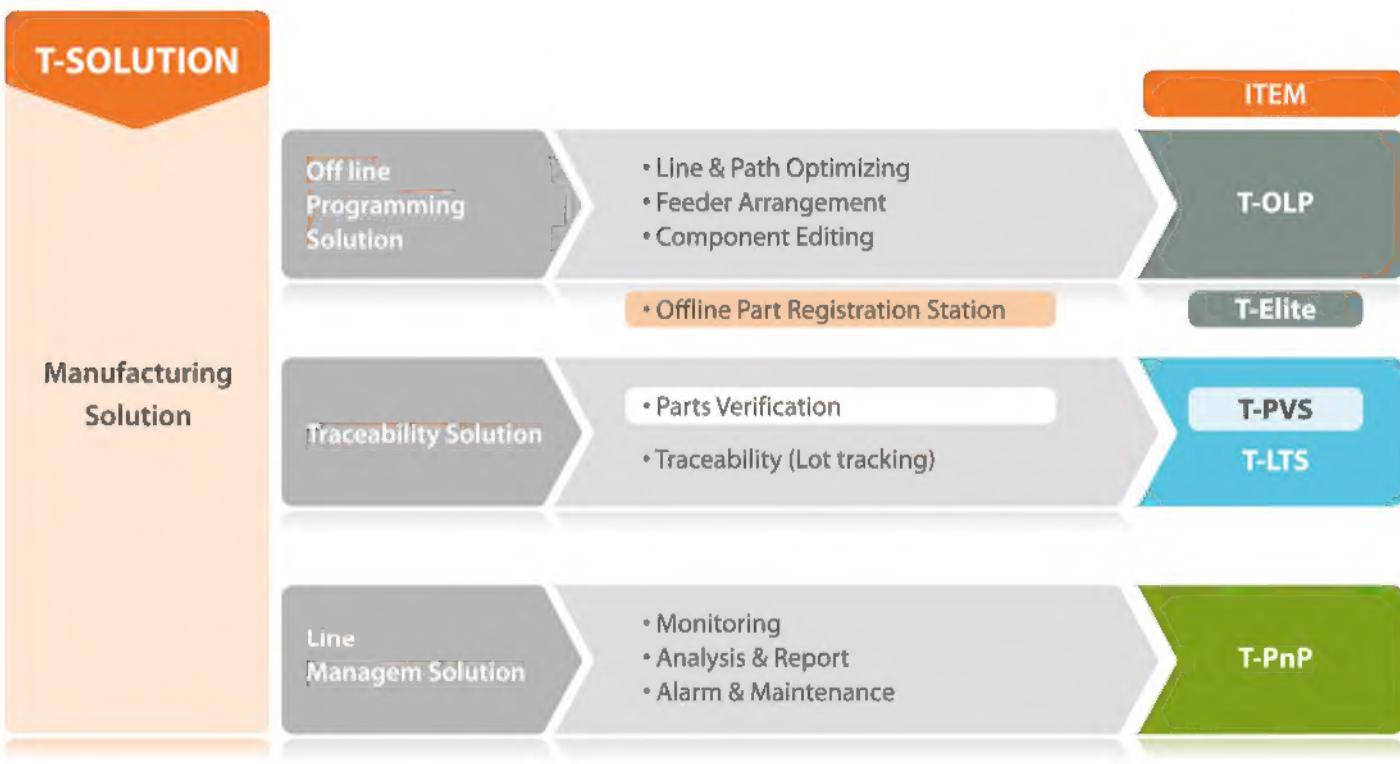
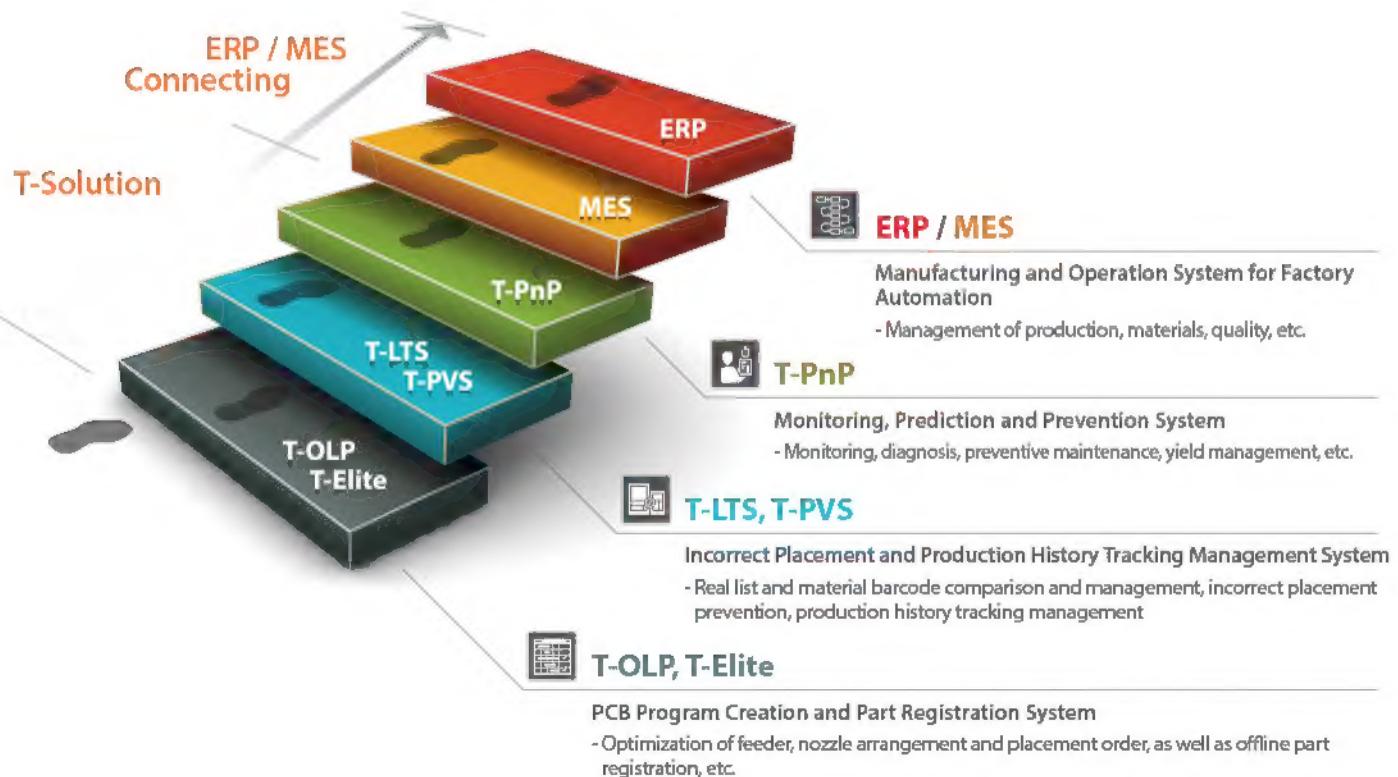
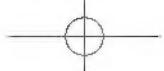
- Machine : SP1-W x 2
- S2 + S2 + F2 / L2 + L2
- Speed : 320,000 CPH
- Feeder Slot : 444 Slot
- Length : 8,800 mm



# DECAN Line Manufacturing Solutions

The DECAN line maximizes productivity in connection with the T-Solution, an optimized software for integrated management, and introduces stable quality. The T-Solution is an integrated management tool developed by Hanwha Techwin for SMT processes, which helps the user easily perform preparation for production, production and production management, thereby maximizing production efficiency.







# Accessories

## Tray Feeder

### STF100D (Dual Magazine Feeder)

- Consisting of the upper and lower magazines with 12 pallets, the dual tray feeder allows the component tray to be replaced without stopping the machine
- Allows various odd-shaped components to be supplied in great quantity
- 24 staged 24 trays / 48 trays



### STF100S (Side Tray Feeder)

- Side component supply device
- Maximizes component supply by utilizing the rear feeder base by 100%
- The connecting C/V helps maximize the utilization of the machine
- Allows replacement of the component tray by pallet without stopping the machine



### STF100N

- Allows replacement of the component tray by pallet without stopping the machine
- 20 staged 20 trays / 40 trays



### One Staged Tray Feeder

- Allows easy installation and removal of a tray feeder in and from a feeder base
- Allows component pickup at high speed
- Allows installation of a tray horizontally or longitudinally according to the shape of a tray
- Available Tray : 2", 4", 136 x 316mm, 200 x 316mm, 272 x 316mm



## Stick Feeder

### Vibration Feeder



- Frequency control method
- Available voltage and current : DC24V, 0.8A±0.8
- Quantity of sticks to be used : Max. 4 pieces
- Components available for supply : SOP, SOJ, PLCC, Connector, etc.

### Stack Stick Feeder

- Available for maximum 9-staged stacking (based on T 20mm stick)
- Non-stop component supply
- Allows easy removal and installation of feeders using the feeder slots as well as air and electricity of the component placer



## Tape Feeder

### Electric Tape Feeder

- Aligns the pickup positions automatically for the improvement of the simultaneous pickup rate
- Allows the supply speed to be set for stable component supply
- Automatic feeding pitch recognition function
- Allows mixed use with a pneumatic feeder in the same feeder base



### W4P1 Feeder

- Possible to handle the W4P1 reel for the supply of 0402 and 03015 microchips
- High supply accuracy



### SMART Feeder

- As an 'Auto Loading/Splicing Free' feeder, reduces the manpower required to perform setup and model change
- Applicable to a small quantity of reels

## Other Feeders

### 6-Lane Lens Feeder



- Allows simultaneous supply and pickup of LED lenses at six lanes



### Bowl Feeder

- Allows simultaneous supply and pickup of LED lenses at five lanes



### Label Feeder

- Allows simultaneous supply of labels at 6 lanes (Applies individual detection sensor)
- Possible to handle reel widths of up to Max. 105mm

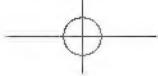
※ For more detailed specifications of labels, please contact our salesperson

## Etc.

### Docking Cart



- Feeders are installed in advance or replaced collectively in the docking cart off-line before model change, which helps reduce the feeder replacement time and improve productivity



## Etc.

### Flux Dipping Unit

- Rotary Flux Dipping Unit
- Installed In the feeder base In the same manner as the tape feeder



### Tape Cutter

- Reduces operator's work by cutting a tape automatically



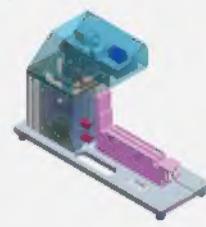
### Feeder Rack/Replacement Jig

- Allows safe transport and storage of tape feeders



### Feeder Calibration Jig

Feeder Inspection Function	Supply accuracy inspection Saved data inspection (Serial No, Firmware Version, sensor resetting, mapping)
Feeder Calibration Function	Sensor resetting, mapping serial number change
Available Feeders	SME 8mm W4P1/12mm/16mm (Option)



## Accessories for Traceability Solution

### T-LTS : Traceability (Lot Tracking)

### T-PVS : Parts Verification



Table Top Station



Reel Scanner



Movable Station



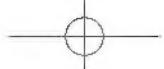
Board Scanner



Fiducial Camera (2D)  
For Board Barcode Scanning



Barcode Printer  
For ID Registration



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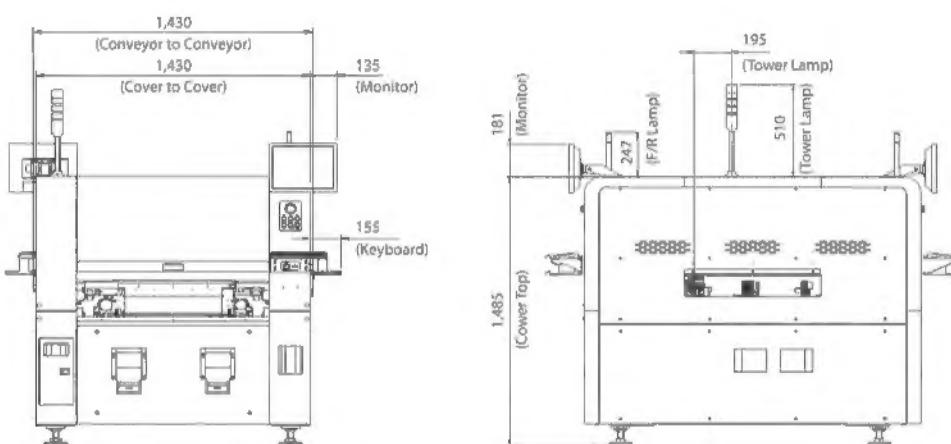


## Specifications

Model	DECAN S2	DECAN F2	DECAN L2
# of Spindles	2 Gantry x 10 Spindles/Head	2 Gantry x 10 Spindles/Head	2 Gantry x 6 Spindles/Head
Placement Speed (Under optimum condition of as defined by Hanwha Techwin.)	92,000 CPH (Optimum)	80,000 CPH (Optimum)	56,000CPH (Flying Vision, Optimum) - 0.14 seconds/component (Flying Vision, SOIC 0.5P) - 0.55 seconds/component (Upward Vision, QFP100 0.5P)
Vision	Flying Vision	Flying Vision Stage Vision(Option)	
Placement Accuracy	±28µm Cpk≥1.0 (03015 chip) ±25µm Cpk≥1.0 (IC)	±40µm Cpk≥1.0 (0402 (01005 inch) chip) ±30µm Cpk≥1.0 (IC, Stage Vision)	
Component Range	03015 ~ Max. □ 55mm (H15mm)	0402 (01005 inch) ~ Max. □ 55mm (H15mm)	0402 (01005 inch) ~ Max. □ 55mm, L75mm (H25mm)
PCB Size	50 x 40 ~ 510 x 460mm (Standard) ~ 610 x 460mm (Option), ~ 740 x 460mm (Option) ~ 810 x 460mm (Option), ~ 1,200 x 460mm (Option)		
Conveyor Configurations	Standard : 1-2-1 Option : 1-2-2/2-2/2-1/1-1 Factory Option : Single Conveyor (Jedec Tray 2ea)		
Feeder Capacity	120ea (8mm)		
Power	Voltage : 3 phase AC200/208/220/240/380/415V ±10% Frequency : 50/60Hz Power Consumption : Max. 5.0kVA		
Air Consumption	50NL/min		
Weight	About 1,800kg		
External Dimensions (mm)	1,430(L) x 1,740(D) x 1,485(H)		

\* Under optimum condition of specified by HANWHA TECHWIN.

## Dimension



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• Please note that specification and product information in this catalog are subject to change without notice.

  
**Hanwha**  
Techwin